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ABSTRACT

Moral development theory, based on the work of Kohlberg and others, offers an approach to growth and stage change which may be applied to the everyday schooling process. Although there are now four general ways in which theory of developmental change is currently being applied, this paper proposes an alternative application of the stage transition aspects of moral development theory. In the major portion of the document, the author presents a proposal for a "Developmental Atmospheres" approach, viewing the elementary classroom as a total social environment where a student's moral development occurs. This plan for movement from theory to program reality for the stage-transition aspect of moral development theory defines the nature of a socially stimulating environment through theoretical definition of how stage change occurs. Further, the plan explains how the connection between theory and practice can be made through four phases of a model: (1) description of essentials of the theoretical explanations of stage change; (2) description of conditions for change evident in this theoretical explanation -- interaction, conflict, +1 reasoning, and restructuring; (3) translation of the four general conditions into classroom process objectives which can be used for observation -- categorizing them by general classroom procedures, children's work activities, the nature of class discussion, and teacher's action; and (4) validation of the observation instrument by data collection, analysis of data, and discussion. (Author/ND)

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Explanations of Developmental Change Applied to Education: Atmospheres for Moral Development

I. Introduction.

II. Current Applications of Theory.

III. Proposal for a "Developmental Atmospheres" Approach.

IV. Conclusions.

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I. Introduction

This paper will examine the explanations of developmental change evident in cognitive-developmental theory, and define how they may be applied to education. The theory to be considered is based on Kohlberg's system of moral development, but is not restricted to his work; the ideas of other cognitive-developmental theorists such as Piaget are also considered, and certain aspects of so-called "cognitive" and "social" development are included in the analysis.

The purpose of this paper is to outline an approach to the use of this moral development theory in education. Specifically, it examines the theoretical explanations for growth and stage-change, and how they may be applied to the everyday schooling process. Because this theory is unfinished and incomplete, the suggestions for their applications must be considered as only possibilities, not exhaustive of the theory, and not the way to do things. Even if the theory were complete and "proven" by empirical evidence, its applications to education should avoid the prescriptive. Piaget's and Kohlberg's theories are already being applied to school, as is to be expected. Some of these applications (1) should be examined as to their consistency with the theory and the nature of their claims to truthfulness, but that is not the task at hand. This paper will propose an alternative approach to the application of an aspect of cognitive-developmental theory to schooling.

From a schoolteacher's point of view, psychology has always had difficulty translating its work into practical terms. The psychologist is usually disappointed with the products of the application of his theory and sometimes aghast at how it comes to be used. Naturally, he is skeptical about applying concepts and ideas which are delicately balanced in a complete theoretical system, about putting his academic life's work into a "curriculum package" to be sold by a publishing company and be "applied" by a schoolteacher between morning recess and lunch hour. My interest is in suggesting ways for teachers to use the work of psychologists in such a way that both parties may respect the product of the application.

The model for the application of theory presented in this paper is also meant to provide a means to test the validity of some constructs of the theory. If not a valid application of theory, the proposal here may at least serve as an approach to testing an hypothesis about developmental change within the constructs of cognitive-developmental theory.

II. Current Applications of Developmental Change Theory

There appear to be four general ways in which the theory of developmental change is currently being applied. 1.Laboratory research experiments are being designed and carried out; 2.school curriculum is being designed and published; 3.programs of overall "treatment" are being implemented; and 4.suggestions are being made to educators in several fields.

Before this writer's proposal is presented, these four other areas will be discussed.

In order to better define the theory in the area of developmental change, several different types of laboratory experiments and theoretical explorations are being conducted. Turiel and others have designed studies which investigate the effects of moral action on stage-change, and the specific nature of the stage-change process that occurs between Kohlberg's stages four and five. These have found that the reasoning/action relationship is different at higher and lower levels of development; that reasoning and action at the stage above that of the subject is generally preferred; that moral action may contribute to disequilibrium; and that stage transition is basically a process of rejecting an old stage and creating a new one.(2) Theoretical work is progressing in relating stage transition in cognitive development to transition in moral development.(3) Kohlberg is trying to straighten out his notion of stage-regression as a developmental change-process to better fit in with the constructs of structural-developmental theory.(4) An area of experimentation which approaches true "application of theory" is Kohlberg and Blatt's experimentation with moral discussion groups in school classes. In these experiments, Kohlberg and similar dilemmas were used as the focus of classroom discussions in which the presentation of +1 reasoning was explicit in the set-ups and questioning of the teacher. Pre-and post-test moral maturity scores showed that this technique had a significant

effect on junior high schoolers' moral reasoning.(5)

Kohlberg and some of his followers have been active in designing curriculum to be published commercially and sold to schools. This includes a high school level moral discussion group program and an elementary school level filmstrip discussion series.(6) These are based on Kohlberg's dilemmas and designed tto be used as classroom activities. The theory about stage transition is used here to the extent that discussion about the dilemmas may lead to cognitive conflict which may lead to growth. The films are especially entertaining and oriented to the proper interest and intellectual levels, but they seem more aimed at the "educational entertainment" market than at the curriculum market. Kohlberg has also been active in applying moral development theory to already existing social studies and law curricula, such as Fenton's inquiry social studies and Gibson's law programs. He has stressed how these programs must help "train" students in formal operational thinking rather than assume they have it already.(7)

Moral development theory has been studied in larger contexts as well, where an entire environment has been seen as a curriculum which has implications for moral stage-growth. There is an ongoing "prison project" where moral discussion groups and a "model prison" have been set up in order to raise the moral levels of the inmates. It is expected that the conflicts which arise from the discussion and the environmental support which will come from a prison operating at a "higher moral level" will cause stage change to occur.(8) A study

has been done of another total environment, the kibbutz, and its effect on the moral development of its teenage residents. Generally positive indications point to the peer group structure, community feeling, and meaning-in-work characteristic of the kibbutz as perpetrators of moral growth.(9) Kohlberg has made many strong pleas for a total school environment which evidences a high moral stage in its everyday operation:

> If schools wish to foster morality, they will have to provide an atmosphere in which interpersonal issues are settled on the basis of principle rather than power. They will have to take the moral question seriously, and provide food for thought instead of conventional "right answers." (10)
>
> The problem is...to establish a more basic context of justice (in the school)." (11)

The "just school" would, apparently, prevent the retardation of moral growth that may now be being caused by schools which commonly operate at stages one and four. This writer accepts this basic idea, but attempts to see this in relation to what is known about the explicit process of moral stage growth.

A final area of theory application has been the many suggestions to educators about how to teach moral development and what this theory means to their everyday work. This is evident in many articles and speeches by Kohlberg and his followers.(12) The basic ideas presented are the non-relativity of the structural devlopmental approach; that teachers should not try to teach adult values to young children; that there are stages of moral development; and that discussions about moral problems will help children grow.

This paper will present another possible application of the stage transition aspects of moral development theory. It is aimed at the classroom as a total social environment which may or may not promote moral growth processes. It attempts to provide precise guidelines for the teacher to apply the theory to the everyday workings of a classroom, and a way to test different "developmental atmospheres" and their relation to moral development. As such, it is an extension of several of the areas outlined above: an experimental test of the theory, a"total treatment" designed for moral development, and a set of specific suggestions for educators.

III. Proposal for a "Developmental Atmoshpheres" Approach.

This section is intended as a plan for the movement from theory to program reality for the stage-transition aspect of moral development theory. It follows several suggestions of the leading theorists concerning the general environmental stimulation of moral growth:

> By and large basic morality develops "naturally" through a variety of intellectual and social stimulations in the home, the peer group, and the school; it does not require systematic programs as such. (13)
>
> The kinds of experience leading to development must be viewed in terms of a stimulation which is general rather than highly specific in its content or meaning. (14)
>
> A complex heterogeneous environment that presents a variety of contradictions is more likely to facilitate the equilibration process than a more homogeneous environment. (15)

This plan will define the nature of this socially stimulating environment through the theoretical definition of how stage-change occurs. If the necessary and/or helpful conditions for

stage transition are explicitly provided in a classroom setting, we will expect more growth in moral reasoning to occur on the part of the children in that class than in a class not so well provided. This section of the paper will explain how the connection between theory and practice may be made, through four phases of work:

Phase I: Description of the essentials of the theoretical explanations of stage-change.
Phase II: Description of a set of necessary conditions for stage change, derived from the theoretical explanation.
Phase III: A. Translation of these conditions into "process objectives" that fit an elementary classroom situation.
B. Putting these objectives in a form which can be used for observation (a classroom observation instrument).
Phase IV: Validation of the instrument: a research proposal.

Phase I: Essentials of stage change theory.

Behind the theoretical notions of how stage change occurs stands a whole body of moral development theory, stemming from G.H. Mead, Jean Piaget, Lawrence Kohlberg, and others, which will not be described here.(16) The basic premise of this theory is that moral reasoning develops through a series of stages, or structures of thinking in each person, that these structures are self-developed out of interaction with the environment, and that the sequence of stages is universal and invariant.(17) It follows a long series of experiments on how stage change occurs in the cognitive domain, conducted in the last decade by several investigators.(19) The cognitive experiments have shown that stage advance involves a state of "readiness" or potential in the child's current structure; an

experience of cognitive conflict within his structure(s); conflict-reducing action of some kind; and a structuring of a new stage. This conception is based on Piaget's equilibration model, which sees each stage as a partial but dynamic equilibrium between the organism and its environment, and between various parts of the internal mental structure. Disequilibrium, which may be caused by an experience of "cognitive conflict," sends the organism on a search for a more equilibrated state. The more equilibrated state is, of course, the next higher stage of reasoning. For Piaget, this equilibration process is the motor of growth.(20)

The model of stage change in the moral realm follows the general pattern of the cognitive findings, and the outline of Piagetian equilibration theory. As summarized by Turiel, moral stage transition is characterized by:

> 1.) A recognition of the inadequacies of the existing mode of thinking (stage) and a questioning of that mode.
> 2.) An attempt to construct a new mode.
> 3.) A tension between the new, partially understood mode and the old mode.
> 4.) An attempt to integrate the old mode into the new one, the structuring of a higher stage. (21)

Implicit in this outline are notions of organism-environment interaction. The existing mode of thinking was structured through such interaction, the conflict and inadequacy became apparent through interaction, and attempts to define the new structure are dependent on moral action. On this last point, a recent study has found a series of phases in the integration of higher stage (+1) reasoning and moral behavior during the period of transition.(22) In general, the process of stage change may be described as follows. The existing

stage of moral reasoning, which has arisen from the person's interaction with the social environment, is found to be inadequate to deal properly with a real or hypothetical situation which comes up in experience. A state of disequilibrium then occurs, which the organism has an innate tendency to find a way out of. Other stages of reasoning, evident in either the person's own mind (stage-mixture), or from other people at a higher stage (+1 reasoning), may be latched onto in an attempt to find a more adequate mode of thinking. This incompletely understood new mode is then put into a real or imagined moral action, and the results of its application are fed back to the old thinking structure. The tension inherent in this old-new feedback process is resolved as the person attempts to integrate the partial-new and old modes of reasoning as he structures a completely new stage of reasoning. This new structure will have all the qualities of the old, plus the adequacies to deal with more situations, reorganized into a more equilibrated schema.

Phase II: Describe the conditions for change evident in this theoretical explanation.

Evident in the theoretical explanation of Phase I above, are several environmental conditions which are involved in stage change. Without careful experimentation, it cannot be stated that any of these conditions are necessary for stage change. We can only say that theoretical consistency and some preliminary research has shown that these conditions can be helpful in promoting change.

Interaction. As was pointed out above, social interaction is an important part of the whole stage-transition process. It is social interaction which is organized by the person into a structure of thinking, and interaction from which conflict arises. +1 reasoning becomes evident to the person through his dealing with others at a higher level. The re-structuring process seems to require moral action, acting on the basis of new reasoning, in order to operate the feedback process to the old structure. And the fact that moral development seems to go faster in complex, high-interaction settings such as cities and industrial cultures than in low interaction settings such as rural villages and agricultural societies, shows that social interaction is an important condition for growth. This interaction may take many forms, such as talk and discussion of real or hypothetical moral actions, dyadic or group work, or everyday dealings with other people.

Conflict. Included in social interaction should be experiences which may cause inadequacies to be perceived in people's current structures. It is this kind of conflict which sets off the disequilibrium necessary for change to occur. An environment which includes many opportunities for conflict-inducing interaction will lead to the heightened operation of the equilibration process in moral development. Conflict may be induced by others' challenges to a person's way of reasoning, by the presentation of hypothetical situations for which the person's structure is inadequate, or by immersion into real life situations where higher modes of thinking are

necessary for a complete solution. A static, simple, homogenous setting would tend to promote less conflict, while a dynamic, complex, heterogenous setting would promote more. Since conflict is necessary for change, the second setting should be connected with more moral growth than the first.

+1 Reasoning. In the theoretical model, the person's attempts at re-equilibration after conflict include an attempt to form a new mode of reasoning. This new mode may come from the person's internal stage-mixture, since most people operate at more than one stage at a time(23), or it may come from the environment, in the form of others who reason at different levels. It has been found that people understand and prefer reasoning at a stage one above their own, while they reject lower-stage reasoning and cannot understand very much higher stage reasoning. (24) Before +1 reasoning can be tried out in action and the results fed back to the structure, the +1 reasoning must be available from some source. An environment which included evident reasoning at the stage above the person would help the process of equilibration work itself through. The presentation of +1 reasoning may also help cause cognitive conflict in the person.

Restructuring. Essential to the theoretical explanation of stage change is the notion that the structures of moral reasoning are created by each person in his own mind out of his interaction with the world. The modes of thinking involved do not come from direct academic teaching or from the learning of social conventions through association or modeling. They are reactions of the organism to social experience, reactions

which attempt to organize this experience and adapt to it. The person has an innate tendency to build structures in this way, but that tendency must be allowed to pursue its ends freely if optimal growth is to occur. An environment which allowed such self-structuring processes to go on, which didn't pre-empt them with ready-made answers to all questions, and which actively promoted such processes, would foster the completion of the equilibration process. More moral development would be the expected result of this process.

Besides being derived from the stage-transition theory as above, these four conditions are also evident in the suggestions of the theorists to educators. To partially establish the content validity of these conditions, some examples from the articles of Kohlberg, Turiel and others are listed below.

Interaction.

> ...opportunities for participation and role-taking in all the basic groups to which the child belongs appear to be important for moral development. (25)
>
> The main experiential determinants of moral development seem to be amount and variety of social experience, the opportunity to take a number of roles and to encounter other perspectives. (26)
>
> ...change from stage to stage is a function of the child's interaction with his environment. (27)
>
> ...moral values and judgments derive from the child's active attempts to organize social experience. Each stage reperesents a construction not originating in the social world but generated out of actions in that social world. (28)

Conflict.

The first step in teaching virtue, then, is the Socratic

step of creating disatisfaction in the student about his present knowledge of the good...exposing the student to moral conflict situations for which his principles have no ready solution. (29)

The teacher must help the child to consider genuine moral conflicts, think about the reasoning he uses insolving such conflicts, see inconsistencies and inadequacies in his way of thinking... (30)

If the child does not experience much cognitive conflict and uncertainty, he will not change. (31)

Our approach stresses (1) Knowledge of the child's stage of functioning. (2) Arousal among children of genuine moral conflict and disagreement about problematic situations. (32)

...increased conflict or disequilibrium is a condition for development. That is, if the individual's existing structure is inadequate to deal with events encountered, the resulting state of heightened disequilibrium (manifested in conflict and confusion) could lead to compensatory activity. (34)

+1 Reasoning.

...if we inspire cognitive conflict in the student and point the way to the next step up the divided line, he will tend to see things previously invisible to him. (35)

The procedures rely on both the induction of cognitive conflict and exposure to the stage of thinking next above the student's own. (36)

(The child) rejects those(moralizings) beneath him and fails to understand those more than a stage above his own. (37)

...our approach stresses...(3) The presentation of modes of thought one stage above the child's own. (38)

That is, one transitional path may be through performance of actions that are guided by reasoning at the stage above. (39)

Restructuring.

...the teacher's primary task is to help the child... (4) find means of resolving such inconsistencies and inadequacies. (40)

> ...if the child is challenged so as to perceive the contradictions in his own thinking, he will try to generate new and better solutions to moral problems. (41)
>
> ...change occurs when perceived conceptual contradictions energize attempts to restructure by exploring the organizational properties of the higher mode of thought. (42)
>
> ...movement from one stage to the next is a process of rejection and construction:...the logic of the existing stage is rejected and a new stage is then created. (43)
>
> ...our evidence indicates that the child cannot be taught directly the principles of any stage, but must generate them himself. (44)
>
> This entire process, even though it can be instigated by external events, is ultimately internally controlled and self-regulated. (45)

Phase III. A: The Translation of the Four General Conditions into Classroom Process Objectives.

From the four general conditions derived from the theory, and from the added educational suggestions of the theorists, this writer has specified twelve classroom-appropriate environmental conditions which should promote moral development. Some of them apply to more than one of the general areas of Interaction, Conflict, +1 Reasoning, and Restructuring. Each was specified with the purpose of easy translation into observable process-objective terms. The twelve conditions are outlined below in their appropriate theoretical areas.

1. Interaction.
    1. General interaction.
    2. Role-taking opportunities and participation.
    3. Presentation of moral problems.
    4. Real-life situations used in class.
    5. Peer discussion.

II. Conflict.
3. Presentation of moral problems.
6. Teacher's knowledge of child's level.
8. Presentation of alternative solutions.
9. Absence of a "right answer" approach.
12. Challenges to children's reasoning.

III. +1 Reasoning.
5. Peer discussion
6. Teacher's knowledge of child's level.
7. Focus on reasoning.
8. Presentation of alternative solutions.
10. Stage-mixture present.

IV. Restructuring.
2. Role-taking opportunities and participation.
5. Peer discussion.
7. Focus on reasoning.
8. Presentation of alternative solutions.
9. Absence of a "right answer" approach.
11. Children's self-structuring of solutions.

These twelve conditions, which should promote the stage-transition process in an elementary school classroom, are translated into measureable process objectives in the next phase of this project. Each objective is meant to be a readily observable occurence in the classroom which should be evident in varying degrees to an outside observer, with little inference involved. Some of the objectives are stated in negative terms, that is, they state a condition which is <u>not</u> conducive to moral development. These negative objectives are indicated with an asterisk, and are scored oppositely to their rating. Each of the twelve conditions above is represented by from three to six objectives, depending on their importance as determined by this writer.

(following page)

List of Process Objectives for Moral Development

1. General interaction.
   1. Children are engaged in a cooperative venture with a group.
   2. Children talk among themselves during class time.
   *3. Children passively listen to the teacher.
   4. Children interact with each other in many different situations.
   5. Social simulation activities are engaged in.

2. Role-taking opportunities and participation.
   6. Teacher points out how another might view a situation.
   7. Discussion includes concern about how another might feel.
   8. Children engage in role-playing activities.

3. Presentation of moral problems.
   9. Social problems with alternative solutions are presented to the group.
   10. Problematic situations or simulations are set up.
   11. Hypothetical dilemmas are presented to the group to be solved.

4. Real-life situations are used in class.
   12. Rules and discipline are discussed freely by children and teacher.
   *13. Teacher takes care of conflicts without involving the group.
   14. Problems of the school and community are presented for class discussion.

5. Peer discussion.
   15. Children share ideas with the group.
   16. Children discuss problem situations with the group.
   17. Children listen to other's arguments and reasons.
   18. Teacher encourages children to talk among themselves in class.
   19. Children are encouraged to present arguments to the group.
   20. Children's questions are discussed by the group.

6. Teacher's knowledge of child's level.
   21. Material presented is appropriate to the level of the children.
   22. Teacher keeps notes and histories of each child's progress and development.
   23. Teacher listens with respect to each child's thinking and reasons.
   24. Teacher keeps track of each child's mode of reasoning.
   25. Each child is given the opportunity to communicate his reasons.

7. Focus on reasoning.
   26. Teacher asks "Why?" after children's answers.
   27. The reasons behind answers and positions are stressed in discussions.
   28. Teacher reflects the ways children reason back to them.

8. Presentation of alternative solutions.
   29. Teacher helps children look at things from different viewpoints.
   30. Alternative solutions to problems are offered by the children.
   31. Teacher asks for several ways to solve the same problem, or several reasons for the same decision.
   32. Teacher offers alternative ways of reasoning about a problem.

9. Absence of a "right answer" approach.
   *33. Teacher approves only correct answers.
   34. Teacher asks questions which require more than a yes or no answer.
   *35. The whole group accepts the same answer to problems.

10. Stage-mixture is present.
   36. Children's ages are distributed over more than three years.
   37. Children of different intellectual levels are in the class.
   38. Teacher presents high- and low-level reasoning for the class to react to.

11. Children's self-structuring of solutions.
   39. Children are encouraged to think of alternative explations for events or problems.
   41. Children utilize many resources to solve problems.
   42. Children use their own methods to solve problems in class.
   43. Teacher allows children to discover relationships and principles in their activities.
   44. Children invent many different solutions to problems.
   45. Children's explanations or ways of solving problems are accepted by the teacher.

12. Challenges to children's reasoning.
   46. Conflict-inducing problems are presented to the group.
   47. Teacher asks challenging questionas about the activities children are engaged in.
   48. Teacher challenges a child's answer with an alternative reason.
   49. Children challenge each other's answers and reasoning.
   50. Conflict between alternative ideas is pointed out.

Phase III. B: Objectives in a Format for use in Observation.

In order to use the specifications of a "developmental atmosphere" evident in these objectives, they must be put into a format which (1) gives concrete suggestions to the teacher, and (2) can be used to measure classrooms on their degree of adherence to them. The observational rating scale which follows is an attempt to achieve those purposes. It re-categorizes the fifty objectives into areas of concern and organization which pertain to the everyday operation of the classroom. In addition, each objective may be measured on a four-point scale based on how evident in the classroom is the condition it specifies. This re-categorization is meant to help the teacher use the theory in a general, everyday way, even if the teacher is unfamiliar with moral development theory and research. It also allows the observer to concentrate on the relevant areas of classroom experiences as they take place. The "developmental atmosphere" of the theory is thereby linked to the overall operation of the classroom.

The four categories are General Classroom Procedures, Children's Work Activities, The Nature of Class Discussions, and Teacher's Actions. The objectives which fall under each category, and the scales for rating them, are listed following. It should be evident that a total "score" for a classroom may be obtained from the use of this list of objectives as an observation instrument. The closer the score to 200, the more conducive to moral development the classroom atmosphere. This instrument and its scoring will be used in the next section of the paper in a research design to validate this project.

Classroom Process Objectives for Moral Development

Part I: General Procedures	no evidence	slight evidence	moderate evidence	extensive evidence	cannot make judgment
4. Children interact with each other in many different situations.	1	2	3	4	X
12. Rules and discipline are discussed freely by children and teacher.	1	2	3	4	X
13. Teacher takes care of conflicts without involving the group. *	1	2	3	4	X
14. Problems of the school and community are presented for class discussion.	1	2	3	4	X
35. The whole group accepts the same answer to problems. *	1	2	3	4	X
36. Children's ages are distributed over more than three years.	1	2	3	4	X
37. Children of different intellectual levels are in the class.	1	2	3	4	X
Part II: Children's Work Activities					
1. Children are engaged in a cooperative venture with a group.	1	2	3	4	X
2. Children talk among themselves during class time.	1	2	3	4	X
3. Children passively listen to the teacher. *	1	2	3	4	X
5. Social simulation activities are engaged in.	1	2	3	4	X
8. Children engage in role-playing activities.	1	2	3	4	X
10. Problematic situations or simulatiions are set up.	1	2	3	4	X
30. Alternative solutions to problems are offered by children.	1	2	3	4	X

	no evidence	slight evidence	moderate evidence	extensive evidence	cannot make judgment
39. Children are encouraged to think of alternative explanations for events or problems.	1	2	3	4	X
41. Children utilize many resources to solve problems.	1	2	3	4	X
42. Children use their own methods to solve problems in class.	1	2	3	4	X
43. Teacher allows children to discover relationships and principles in their activities.	1	2	3	4	X
44. Children invent many different solutions to problems.	1	2	3	4	X

Part III: Nature of Class Discussions

7. Discussion includes concern about how another might feel.	1	2	3	4	X
9. Social problems with alternative solutions are presented to the group.	1	2	3	4	X
11. Hypothetical dilemmas are presented to the group to be solved.	1	2	3	4	X
15. Children share ideas with others.	1	2	3	4	X
16. Children discuss problem situations with the group.	1	2	3	4	X
17. Children listen to others' arguments and reasons.	1	2	3	4	X
19. Children are encouraged to present arguments to the group.	1	2	3	4	X
20. Children's questions are discussed by the group.	1	2	3	4	X
25. Each child is given the opportunity to communicate his reasons.	1	2	3	4	X
27. The reasons behind answers and positions are stressed in discussions.	1	2	3	4	X

	no evidence	slight evidence	moderate evidence	extensive evidence	cannot make judgment
49. Children challenge each other's answers and reasoning.	1	2	3	4	X
50. Conflict between alternative ideas is pointed out.	1	2	3	4	X

Part IV: Teacher's Actions

6. Teacher points out how another might view a situation.	1	2	3	4	X
18. Teacher encourages children to talk among themselves in class.	1	2	3	4	X
21. Material presented is appropriate to the level of the children.	1	2	3	4	X
22. Teacher keeps notes and histories of each child's progress and development.	1	2	3	4	X
23. Teacher listens with respect to each child's thinking and reasons.	1	2	3	4	X
24. Teacher keeps track of each child's mode of reasoning.	1	2	3	4	X
26. Teacher asks "Why?" after children's answers.	1	2	3	4	X
28. Teacher reflects the ways children reason back to them.	1	2	3	4	X
29. Teacher helps children look at things from different viewpoints.	1	2	3	4	X
31. Teacher asks for several ways to solve the same problem, or several reasons for the same decision.	1	2	3	4	X
32. Teacher offers alternative ways of reasoning about a problem.	1	2	3	4	X
33. Teacher approves only correct answers. *	1	2	3	4	X
34. Teacher asks questions which require more than a yes or no answer.	1	2	3	4	X

	no evidence	slight evidence	moderate evidence	extensive evidence	cannot make judgment
38. Teacher presents high- and low-level reasoning for the class to react to.	1	2	3	4	X
45. Children's explanations or ways of solving problems are accepted by the teacher.	1	2	3	4	X
47. Teacher asks challenging questions about the activities children are engaged in.	1	2	3	4	X
48. Teacher challenges a child's answer with an alternative reason.	1	2	3	4	X

Scoring:

* after an objective denotes a negative condition. These should be scored the opposite of what is circled: score 4 for 1, 3 for 2, 2 for 3, and 1 for 4.

Phase IV: Validation of the Observation Instrument:
A Research Proposal.

The most interesting research that is to be done with this list of objectives concerns its construct validity. The list claims to measure the processes necessary for growth in the terms of moral development theory. If this claim is valid, we would expect that developmental growth, as measured by moral development interviews, would be greater for those children in classrooms which scored high on the scale than for comparable children in low-scoring classrooms. We would expect this difference in measured growth to be due to (1) the acceleration of natural growth by the high-scoring classrooms or (2) the restriction of natural growth by the low-scoring classrooms, or a combination of both factors. The research design proposed here will serve to test how well this instrument fits into the theoretical system it claims to represent, and/or how well the theory has defined the processes and mechanisms of growth.

Proposed here is a "naturalistic variations" design as the best <u>feasible</u> means to test the instrument. The best design, it is realized, would be a truly experimental one, using the list of objectives to design and implement several classrooms, half of them to be as high-scoring as possible and half as low-scoring as possible. Children and teachers would then be randomly assigned to classrooms. Children would be pre- and post-tested on moral interviews, and classrooms would be periodically checked to assess the proper implementaion of the design.

Since this kind of <u>in vitro</u> experimentation is almost impossible to conduct in this country today, we must settle for

a naturalistic variations design. The results of this quasi-experimental research will not have the internal or external validity of a true experiment, but with enough replications it it should serve to adequately test the basic hypothesis.

Data Collection

After the list of classroom process objectives has been pilot-tested to establish its reliability, and its problem items changed or removed, the study could begin. Generally, a number of classrooms will be found where the study may take place. This number will depend on the personnel and cooperation available, the more classrooms the better. In September of the school year, a random sample of the children in the classrooms (or all the children if that is possible) will be pre-tested in several moral development interviews. Pre-test scores will be recorded interms of moral maturity scores evidenced by each child.(46)

Meanwhile, the classrooms will be observed and rated according to the scale, preferably by someone who is not involved in rating the children. Periodic visits will be made to each classroom throughout the year, and the score on the rating scale recorded on each visit. Classrooms which show a wide variation in scores throughout the year will be dropped from the main sample to be the subject of later special analysis. By the end of the school year, the stable classrooms should each have an average of scores from the various administrations of the observation instrument with little deviation.

Sample children will then be post-tested in moral interviews at the end of the school year, and their moral

maturity scores recorded.

Analysis of Data

Classrooms will be ranked interms of their average score on the rating scale, on a continuum from "most developmental" to"least developmental", Individual children's scores will be recorded as changes in moral maturity score, i.e., +54, -31, etc. Data may be compared in several ways. The change in children's moral maturity scores in each classroom may be averaged to form a total classroom change score. The classrooms may then be ranked as to their total amount of student change. This ranking of classrooms may then be compared with their ranking on the process observation scale. A close fit between the rankings would support the hypothesis that higher-scoring classrooms evidence the most developmental change in children.

Another method of date analysis would be to take the highest-scoring 20% of classrooms and the lowest-scoring 20%, and compare the average change scores of the children in each of these groups. Our hypothesis would expect more positive change in the top 20% than in the bottom 20%.

Also, individual children could be ranked on the basis of their change scores, from most change to least change, and their ranks compared with the rankings of their classrooms. This would help to determine the amount of variance attributable to the classroom as opposed to inter-individual variance. A considerable amount of classroom-explained variance would support the hypothesis. Scores on the separate areas of the process objectives list may also be used in comparison, to

assess their relationship with student change. The objectives may be broken down in terms of the four conditions derived from the theory, and the scores for each condition compared with student change scores.

Discussion

Although this design does not guarantee that all variance in measured change is due to the classroom atmospheres as measured by our instrument, it can serve to lend support or non-support to our hypothesis, provided the evidence is strong and replicated across many classrooms. The design also serves to take care of the following threats to validity common to educational "treatment" studies:

1) Maturation: Since pre- to post-test periods were identical for all students, the effects of natural growth are controlled for.

2) Testing effects: Since everyone had the same tests, the effects of pre-testing on post-test scores will be distributed equally among high and low scorers. That testing alone may help spur developmental change must be kept in mind, however, when the results are to be generalized to other situations.

3) Hawthorne effects: They should be identical for all classrooms involved, and much less than if it had been a true experiment.

The following threats to validity, however, must be kept in mind:

1) History: Measured changes may be due to the point in

development the children were at when the year began. Some may have been on the brink of stage-change.

2) Instrumentation: Interviewers may not be truly measuring the stages posited in the theory, or they may change their scoring emphases over time.

3) Selection: A certain kind of teacher or child may naturally end up in a more- or less-developmental classroom, due to their personal styles, academic performance, or other status.

This study may be done at several levels, with a few classrooms or with hundreds, with all children in all classrooms being interviewed or only a representative sample. The only intrusions into the educational process would be the two interview sessions and the periodic observations. In testing the construct validity of this particular instrument, we will also be testing some of the basic tenets of the theory of stage-transition in moral development.

IV. Conclusions.

The result of this exercise in the application of theory to practice has two purposes. The list of classroom objectives may serve as a set of guidelines for use by teachers who wish to set up a general atmosphere for moral development. If the steps between the theory and the objectives are laid out, it may also serve as a means for teacher education in this area. Its use should be resrticted, however, until such research as was described in Phase IV shows that the atmosphere so described

does indeed lead to more moral growth.

The list of objectives, when applied in an observation and testing program as described above, may also serve to test the stage-transition concepts in moral development theory. Along with laboratory and experimental research, this quasi-experimental approach will add to the search for the truthfulness of this theory. It goes beyond the specific mechanisms of individual change processes to relate them to and examine the natural environment of children. Unless these objectives which have been derived are not truly representative of the theory (have no content validity), then the research program as described should be an important test of this area of the theory. In this case, content validity may be established only by the comments and criticisms of "experts". The project should wait for that to be established. Meanwhile, new experiments may add to or change the stage-transition theory, which would necessitate a change in the list of process objectives. So these "results" can only be considered as a cross-section of an ongoing project.

This project, on my part, is a section of a larger project which attempts to apply cognitive-developmental theory to the everyday schooling process. Another paper done in connection with this project describes a Piagetian approach to the evaluation of educational programs, student outcomes, and classroom processes. The emphasis is on a psychologically valid application of this school of developmental psychology, one which does not isolate separate notions from the context of a complex body of theory, and which looks at the schooling

process as a whole as a general atmosphere. Piagetian-style theory has been especially misunderstood and misused by the "school" section of the educational community. Hopefully, the approach evident in this paper is a move toward a valid form of theory-application.

Notes

1. Examples of other applications of cognitive-developmental theory include Weikart's cognitive curriculum, Kamii's pre-school program, Lavatelli's elementary program, Furth's program described in Thinking Goes to School, and the programs described in Athey & Rubadeau, and Schwebel and Raph. Kohlberg's moral discussion curricula for high school, and Kohlberg and Selman's elementary moral education filmstrips are other applications.

2. See articles by Turiel: 1969, 1973, 1974; Turiel & Rothman, 1974; Rest, Turiel, and Kohlberg, 1969.

3, This is evident in Turiel, 1969 and 1973.

4. See Kohlberg & Kramer, 1969, and Kohlberg, 1974 (mimeo).

5. See Blatt & Kohlberg, 1974 (mimeo).

6. Some of the moral discussions have been published by American Educational Paperbacks Co. The elementary filmstrips series is published by Guidance Associates, Inc.

7. See Kohlberg's Nat'l. Council of Social Studies paper, 1973.

8. See Kohlberg, Scharf & Hickey, 1972.

9. See Kohlberg, 1971b.

10. Kohlberg, 1972a, p.16.

11. Kohlberg, 1970, p.122.

12. See Kohlberg, et.al., 1967,1968, 1969, 1970, 1971a, 1971b, 1971c, 1972a, 1972b.

13. Kohlberg, 1967, p.181.

14. Kohlberg & Mayer, 1972b, p.488.

15. Turiel, 1969, p. 130.

16. See George H. Mead's Mind, Self & Society, Piaget's The Moral Judgment of the Child, and Kohlberg's "Stage and Sequence" article (1969).

17. The best complete summary is in Kohlberg's"Stage & Sequence" article (1969).

18. See note 2.

19. For cognitive stage-change experiments see Inhelder and Sinclair, 1969; Langer, 1969; Greco, 1970. Also work by Smedslund, Engleman, and Kohnstamm not cited here.

20. See Piaget, The Psychology of Intelligence and Six Psychological Studies, and Flavell, 1963.

21. Adapted from Turiel, 1973, p. 750.

22. See Turiel & Rothman, 1974 (mimeo).

23. See Turiel, 1969, for a discussion of the stage-mixture idea.

24. See Rest, Turiel & Kohlberg, 1969.

25. Kohlberg, 1968, p. 491.

26. Kohlberg, 1972a, p. 15.

27. Turiel, 1974, p. 2.

28. Turiel, 1973, p. 136.

29. Kohlberg, 1970, p. 82.

30. Kohlberg, 1972a, p. 16.

31. Kohlberg, 1971b, p. 368.

32. Kohlberg and Turiel, 1971c, p. 416.

33. Kohlberg & Turiel, 1971c, p. 454.

34. Turiel, 1974, p. 3.

35. Kohlberg, 1970, p. 82.

36. Kohlberg, 1972a, p. 16.

37. Kohlberg, 1971b, p. 368.

38. Kohlberg & Turiel, 1971c, p. 416.

39. Turial & Rothman, 1974 (mimeo), p. 20.

40. Kohlberg & Turiel, 1971c, p. 454.

41. Kohlberg & Turiel, 1971c, p. 454.

42. Turiel, 1969, p. 127.

43. Turiel, 1974, p. 33.

44. Turiel, 1973, p. 745.

45. Turiel, 1973, p. 747.

46. An explanation of "moral maturity score" is in the Blatt & Kohlberg article, p. 16.

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